

10/8/03

Access-DB# 105599

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Wayne Lange Examiner #: 60603 Date: 10-8-03
Art Unit: 1754 Phone Number 308-0248 Serial Number: 10/052225
Mail Box and Bldg/Room Location: C13-9D17 Results Format Preferred (circle) PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Ammonia Decomposition Catalysts
Inventors (please provide full names): Shigeru Nojima; Rie Tokoyama;
Kouzo Hiroshima-shi
Earliest Priority Filing Date: 6-8-94

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

*Please do a litigation search
for U.S. Patent 5,679,313 (for
Reissue application 4481/052225)*

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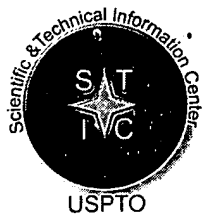
Searcher: [Signature]
Searcher Phone: _____
Searcher Location: _____
Date Searcher Picked Up: 10/8/03
Date Completed: 10/8/03
Searcher Prep & Review Time: 2
Clerical Prep Time: _____
Online Time: 6

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) _____
Bibliographic _____
Litigation ☒ _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN _____
Dialog _____
Questel/Orbit 33.42
Dr. Link _____
Lexis/Nexis 40.00
Sequence Systems _____
WWW/Internet _____
Other (specify) _____



STIC Search Report

EIC 1700

STIC Database Tracking Number: 105599

**TO: Wayne Langel
Location: CP3 9D17
Art Unit : 1754
October 8, 2003**

Case Serial Number: 10/052225

**From: Kendra Mellerson
Location: EIC 1700
CP3/4-3D62
Phone:308-4483**

Kendra.Mellerson@uspto.gov

Search Notes

No Cases Reported

Current session 08/10/2003

(C) QUESTEL 1994

QUESTEL.ORBIT (TM) 1998

08/10/03 17*30*50

Last connection: 06/10/03 20*46*03

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Query/Command : FILE PLUSPAT

QUESTEL - Time in minutes : 0,62

The cost estimation below is based on Questel's
standard price list

Estimated cost :	0.57 USD
Cost estimated for the last database search :	0.57 USD
Estimated total session cost :	0.57 USD

Selected file: PLUSPAT

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New Patent Citation Commands & FAM Citation Report - see INFO PATCITE

Last update of file: 2003/10/01 (YYYY/MM/DD) 2003-39/UP (basic update)

Search statement 1

Query/Command : US5679313/PN

** SS 1: Results 1

Search statement 2

Query/Command : PRT FULL NONSTOP LEGALALL

1/1 PLUSPAT - ©QUESTEL-ORBIT

PN - US5679313 A 19971021 [US5679313]
TI - (A) Ammonia decomposition catalysts
PA - (A) MITSUBISHI HEAVY IND LTD (JP)

PA0 - Mitsubishi Jukogyo Kabushiki Kaisha, Tokyo [JP]
IN - (A) NOJIMA SHIGERU (JP); TOKUYAMA RIE (JP); IIDA KOUZO (JP)
AP - US47205795 19950606 [1995US-0472057]
PR - JP12599194 19940608 [1994JP-0125991]
 JP12599294 19940608 [1994JP-0125992]
 US47205795 19950606 [1995US-0472057]
IC - (A) C01B-003/04
EC - B01D-053/86F4
 B01J-029/04
 B01J-029/06
 B01J-037/02M6
PCL - ORIGINAL (O) : 423237000; CROSS-REFERENCE (X) : 423351000 423658200
DT - Corresponding document; Intellectual family
CT - US5338715; DE4020914; JP53-132465; JP02107265
STG - (A) United States patent
AB - An ammonia decomposition catalyst wherein a first catalyst having a crystalline silicate w
 represented by the formula in terms of molar ratio of oxides as dehydrated: $(1+/-0.8)R_2O$.
 $[aM_2O_3.bM'O.cAl_2O_3].ySiO_2$, wherein R denotes an alkaline metal ion and/or hydrogen
 denotes a VIII Group element, rare earth element, titanium, vanadium, chromium, niobium
 antimony or gallium, M' denotes magnesium, calcium, strontium or barium, $a \geq 0$, $20 > b >$
 $a+c=1$, $3000 > y > 11$ or a specific porous material as a carrier and iridium or a noble metal a
 active metal is present together with or covered with a second catalyst having at least one
 element selected from the group consisting of titanium, vanadium, tungsten and molybden
 necessary, as well as a method of using the same.

 I / I LGST - ©LEGSTAT

PN - US 5679313 [US5679313]
AP - US 472057/95 19950606 [1995US-0472057]
DT - US-P
ACT - 19950606 US/AE-A
 APPLICATION DATA (PATENT)
 US 472057/95 19950606 [1995US-0472057]

 19950606 US/AS02
 ASSIGNMENT OF ASSIGNOR'S INTEREST
 MITSUBISHI JUKOGYO KABUSHIKI KAISHA 5-1, MARUNOUCHI 2-CHOME
 CHIYODA-KU, TOKYO, * NOJIMA, SHIGERU : 19950518; TOKUYAMA, RIE : 1995
 IIDA, KOUZO : 19950518

 19971021 US/A
 PATENT

 19980811 US/CC
 CERTIFICATE OF CORRECTION

 20020521 US/RF
 REISSUE APPLICATION FILED

20020116
UP - 2002-22

1/1 CRXX - ©CLAIMS/RRX

PN - 5,679,313 A 19971021 [US5679313]
PA - Mitsubishi Jukogyo K K JP
ACT - 20020116 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20020521
REISSUE REQUEST NUMBER: 10/052225
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 1754

Reissue Patent Number:

Query/Command : FILE INPADOC

PLUSPAT - Time in minutes : 0,38
The cost estimation below is based on Questel's
standard price list

Estimated cost :	0.88 USD
Records displayed and billed :	1
Estimated cost :	1.25 USD
Cost estimated for the last database search :	2.13 USD
Estimated total session cost :	2.70 USD

LGST - Time in minutes : 0,02
The cost estimation below is based on Questel's
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Estimated cost :	0.02 USD
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Estimated cost :	0.60 USD
Legal-Status informations :	1
Estimated cost :	0.50 USD
Cost estimated for the last database search :	1.12 USD
Estimated total session cost :	3.82 USD

CRXX - Time in minutes : 0,09
The cost estimation below is based on Questel's
standard price list

Estimated cost :	0.15 USD
Records displayed and billed :	1
Estimated cost :	5.30 USD
Legal-Status informations :	1
Estimated cost :	0.50 USD
Cost estimated for the last database search :	5.95 USD
Estimated total session cost :	9.77 USD

LITA - Time in minutes : 0,01
The cost estimation below is based on Questel's
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Estimated cost :	0.02 USD
Cost estimated for the last database search :	0.02 USD
Estimated total session cost :	9.79 USD

Selected file: INPADOC

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Covers 1968/1973 thru weekly updates (2003-40)
For information on content, (...)INFO INPD.

Search statement 1

Query/Command : FAM US5679313/PN

1 Patent Groups

**** SS 1: Results 12**

Search statement 2

Query/Command : FAMSTATE NONSTOP

1 / 12 INPADOC - ©INPADOC

PN - AT 235301 E 20030415 [ATE235301]
TI - VERWENDUNG VON KATALYSATOREN ZUR ZERSETZUNG VON AMMONIAK
IN - NOJIMA SHIGERU; TOKUYAMA RIE; IIDA KOUZO
PA - MITSUBISHI HEAVY IND LTD [JP]
AP - AT 95108809/95-EP 19950608 [1995EP-0108809]
PR - JP 125991/94-A 19940608 [1994JP-0125991]
JP 125992/94-A 19940608 [1994JP-0125992]
IC - B01D-053/86; B01J-023/46; B01J-023/64; B01J-029/04; B01J-029/06; B01J-029/068; B01J-029/076

1 / 2 LEGALI - ©LEGSTAT

PN - AT 235301 [ATE235301]
DT - AT-R
ACTE - 20030415 AT/REF-P
CORRESPONDS TO EP-PATENT
(EP 686423 20030326 [EP-686423])
UP - 2003-19

2 / 2 LEGALI - ©LEGSTAT

PN - EP 686423 [EP-686423]
AP - EP 95108809/95 19950608 [1995EP-0108809]
DT - EP-P
ACTE - 19950608 EP/AE-A

EP-APPLICATION
EP 95108809/95 19950608 [1995EP-0108809]

19951213 EP/AK-A2 [+]
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH
REPORT:
AT DE IT NL

19951213 EP/A2 [+]
PUBLICATION OF APPLICATION WITHOUT SEARCH REPORT

19970702 EP/AK-A3 [+]
DESIGNATED CONTRACTING STATES IN A SEARCH REPORT:
AT DE IT NL

19970702 EP/A3 [+]
SEPARATE PUBLICATION OF THE SEARCH REPORT (ART. 93)

19970917 EP/17P [+]
REQUEST FOR EXAMINATION FILED
970718

19971029 EP/17Q [+]
FIRST EXAMINATION REPORT
970915

20020828 EP/RIC1
CLASSIFICATION (CORRECTION)
7B 01D 53/86 A, 7B 01J 23/46 B, 7B 01J 23/64 B, 7B 01J 29/04 B, 7B 01J 29/06 B, 7B 0
29/068 B, 7B 01J 29/076 B

20020828 EP/RTI1
TITLE (CORRECTION)
USE OF AMMONIA DECOMPOSITION CATALYSTS

20030326 EP/AK-B1 [+]
DESIGNATED CONTRACTING STATES MENTIONED IN A PATENT SPECIFICAT
AT DE IT NL

20030326 EP/B1 [+]
PATENT SPECIFICATION

20030326 EP/REF-R [+]
IN AUSTRIA REGISTERED AS:
(AT 235301 20030415 [ATE235301])

20030430 EP/REF-P
CORRESPONDS TO:
(DE 69530024 20030430 [DE69530024])

UP - 2003-19

2 / 12 INPADOC - ©INPADOC

PN - CA 2151229 AA 19951209 [CA2151229]
TI - AMMONIA DECOMPOSITION CATALYSTS
LA - ENG
IN - NOJIMA SHIGERU [JP]; TOKUYAMA RIE [JP]; IIDA KOUZO [JP]
PA - MITSUBISHI HEAVY IND LTD [JP]
AP - CA 2151229/95-A 19950607 [1995CA-2151229]
PR - JP 125991/94-A 19940608 [1994JP-0125991]
JP 125992/94-A 19940608 [1994JP-0125992]
US 472057/95-A 19950606 [1995US-0472057]
IC - B01J-023/46; B01D-053/58

3 / 12 INPADOC - ©INPADOC

PN - CA 2151229 C 19990105 [CA2151229]
TI - AMMONIA DECOMPOSITION CATALYSTS
LA - ENG
IN - NOJIMA SHIGERU [JP]; TOKUYAMA RIE [JP]; IIDA KOUZO [JP]
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PR - JP 125991/94-A 19940608 [1994JP-0125991]
JP 125992/94-A 19940608 [1994JP-0125992]
US 472057/95-A 19950606 [1995US-0472057]
IC - B01J-023/40; B01J-029/068; B01J-029/076; B01J-023/46; B01D-053/58; B01J-023/64; B01J-053/86

4 / 12 INPADOC - ©INPADOC

PN - DE 69530024 C0 20030430 [DE69530024]
TI - VERWENDUNG VON KATALYSATOREN ZUR ZERSETZUNG VON AMMONIAK
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PA - MITSUBISHI HEAVY IND LTD [JP]
AP - DE 69530024/95-A 19950608 [1995DE-6030024]
PR - JP 125991/94-A 19940608 [1994JP-0125991]
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IC - B01D-053/86; B01J-023/46; B01J-023/64; B01J-029/04; B01J-029/06; B01J-029/068; B01J-029/076

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PN - DE 69530024 [DE69530024]
DT - DE-P
ACTE - 20030430 DE/REF-P
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(EP 686423 20030430 [EP-686423])
UP - 2003-18

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PN - EP 686423 [EP-686423]
AP - EP 95108809/95 19950608 [1995EP-0108809]
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ACTE - 19950608 EP/AE-A
EP-APPLICATION
EP 95108809/95 19950608 [1995EP-0108809]

19951213 EP/AK-A2 [+]
DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH
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29/068 B, 7B 01J 29/076 B

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JP 125992/94-A 19940608 [1994JP-0125992]
US 472057/95-A 19950606 [1995US-0472057]
IC - B01D-053/86; B01J-023/46; B01J-023/64; B01J-029/04; B01J-029/06; B01J-029/068; B01J-029/076
DS - AT* DE* IT* NL*

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PN - AT 235301 [ATE235301]
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ACTE - 20030415 AT/REF-P
CORRESPONDS TO EP-PATENT
(EP 686423 20030326 [EP-686423])
UP - 2003-19

2 / 3 LEGALI - ©LEGSTAT

PN - DE 69530024 [DE69530024]
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CORRESPONDS TO
(EP 686423 20030430 [EP-686423])
UP - 2003-18

3 / 3 LEGALI - ©LEGSTAT

PN - EP 686423 [EP-686423]
AP - EP 95108809/95 19950608 [1995EP-0108809]

DT - EP-P

ACTE -

19950608 EP/AE-A
EP-APPLICATION
EP 95108809/95 19950608 [1995EP-0108809]

19951213 EP/AK-A2 [+]
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7B 01D 53/86 A, 7B 01J 23/46 B, 7B 01J 23/64 B, 7B 01J 29/04 B, 7B 01J 29/06 B, 7B 0
29/068 B, 7B 01J 29/076 B

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PATENT SPECIFICATION

20030326 EP/REF-R [+]
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(AT 235301 20030415 [ATE235301])

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CORRESPONDS TO:

(DE 69530024 20030430 [DE69530024])

UP - 2003-19

6 / 12 INPADOC - ©INPADOC

PN - EP 686423 A2 19951213 [EP-686423]

TI - AMMONIA DECOMPOSITION CATALYSTS

LA - ENG

IN - NOJIMA SHIGERU C O MITSUBISHI [JP]; TOKUYAMA RIE C O MITSUBISHI JU [JP]; IIDA KOUZO C O MITSUBISHI JUKO [JP]

PA - MITSUBISHI HEAVY IND LTD [JP]

AP - EP 95108809/95-A 19950608 [1995EP-0108809]

PR - JP 125991/94-A 19940608 [1994JP-0125991]
JP 125992/94-A 19940608 [1994JP-0125992]
US 472057/95-A 19950606 [1995US-0472057]

IC - B01D-053/86; B01J-023/40; B01J-023/46; B01J-023/64; B01J-029/04; B01J-029/068; B01J-029/076

DS - AT* DE* IT* NL*

1 / 3 LEGALI - ©LEGSTAT

PN - AT 235301 [ATE235301]

DT - AT-R

ACTE - 20030415 AT/REF-P
CORRESPONDS TO EP-PATENT
(EP 686423 20030326 [EP-686423])

UP - 2003-19

2 / 3 LEGALI - ©LEGSTAT

PN - DE 69530024 [DE69530024]

DT - DE-P

ACTE - 20030430 DE/REF-P
CORRESPONDS TO
(EP 686423 20030430 [EP-686423])

UP - 2003-18

3 / 3 LEGALI - ©LEGSTAT

PN - EP 686423 [EP-686423]

AP - EP 95108809/95 19950608 [1995EP-0108809]

DT - EP-P

ACTE - 19950608 EP/AE-A
EP-APPLICATION
EP 95108809/95 19950608 [1995EP-0108809]

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29/068 B, 7B 01J 29/076 B

20020828 EP/RTI1
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USE OF AMMONIA DECOMPOSITION CATALYSTS

20030326 EP/AK-B1 [+]
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PATENT SPECIFICATION

20030326 EP/REF-R [+]
IN AUSTRIA REGISTERED AS:
(AT 235301 20030415 [ATE235301])

20030430 EP/REF-P
CORRESPONDS TO:
(DE 69530024 20030430 [DE69530024])

UP - 2003-19

PN - EP 686423 A3 19970702 [EP-686423]
TI - AMMONIA DECOMPOSITION CATALYSTS
LA - ENG
IN - NOJIMA SHIGERU [JP]; TOKUYAMA RIE [JP]; IIDA KOUZO [JP]
PA - MITSUBISHI HEAVY IND LTD [JP]
AP - EP 95108809/95-A 19950608 [1995EP-0108809]
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JP 125992/94-A 19940608 [1994JP-0125992]
US 472057/95-A 19950606 [1995US-0472057]
IC - B01D-053/86; B01J-023/40; B01J-023/46; B01J-023/64; B01J-029/04; B01J-029/068; B01J-029/076
DS - AT* DE* IT* NL*

1 / 3 LEGALI - ©LEGSTAT

PN - AT 235301 [ATE235301]
DT - AT-R
ACTE - 20030415 AT/REF-P
CORRESPONDS TO EP-PATENT
(EP 686423 20030326 [EP-686423])
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2 / 3 LEGALI - ©LEGSTAT

PN - DE 69530024 [DE69530024]
DT - DE-P
ACTE - 20030430 DE/REF-P
CORRESPONDS TO
(EP 686423 20030430 [EP-686423])
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3 / 3 LEGALI - ©LEGSTAT

PN - EP 686423 [EP-686423]
AP - EP 95108809/95 19950608 [1995EP-0108809]
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EP-APPLICATION
EP 95108809/95 19950608 [1995EP-0108809]

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DESIGNATED CONTRACTING STATES IN AN APPLICATION WITHOUT SEARCH
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7B 01D 53/86 A, 7B 01J 23/46 B, 7B 01J 23/64 B, 7B 01J 29/04 B, 7B 01J 29/06 B, 7B 0
29/068 B, 7B 01J 29/076 B

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(AT 235301 20030415 [ATE235301])

20030430 EP/REF-P
CORRESPONDS TO:
(DE 69530024 20030430 [DE69530024])

UP - 2003-19

8 / 12 INPADOC - ©INPADOC

PN - JP 3132960 B2 20010205 [JP3132960]
IN - NOJIMA SHIGERU; IIDA KOZO
PA - MITSUBISHI HEAVY IND LTD
AP - JP 125992/94-A 19940608 [1994JP-0125992]
PR - JP 125992/94-A 19940608 [1994JP-0125992]
US 472057/95-A 19950606 [1995US-0472057]

IC - B01J-029/44; B01D-053/86

9 / 12 INPADOC - ©INPADOC

PN - JP 3132959 B2 20010205 [JP3132959]
IN - NOJIMA SHIGERU; IIDA KOZO
PA - MITSUBISHI HEAVY IND LTD
AP - JP 125991/94-A 19940608 [1994JP-0125991]
PR - JP 125991/94-A 19940608 [1994JP-0125991]
US 472057/95-A 19950606 [1995US-0472057]
IC - B01J-029/44; B01D-053/86; B01J-023/652; B01J-027/053; B01J-029/035; B01J-029/076;
029/16; B01J-029/26

10 / 12 INPADOC - ©INPADOC

PN - JP 7328437 A2 19951219 [JP07328437]
TI - AMMONIA DECOMPOSITION CATALYST
IN - NOJIMA SHIGERU; IIDA KOZO
PA - MITSUBISHI HEAVY IND LTD
AP - JP 125991/94-A 19940608 [1994JP-0125991]
PR - JP 125991/94-A 19940608 [1994JP-0125991]
US 472057/95-A 19950606 [1995US-0472057]
IC - B01J-023/40; B01D-053/86; B01J-023/64; B01J-023/648; B01J-023/652; B01J-029/076; B
035/04

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PN - JP 7328438 A2 19951219 [JP07328438]
TI - CATALYST FOR DECOMPOSITION OF AMMONIA
IN - NOJIMA SHIGERU; IIDA KOZO
PA - MITSUBISHI HEAVY IND LTD
AP - JP 125992/94-A 19940608 [1994JP-0125992]
PR - JP 125992/94-A 19940608 [1994JP-0125992]
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IC - B01J-023/40; B01D-053/86; B01J-023/64; B01J-023/648; B01J-023/652; B01J-027/053; B
029/12; B01J-029/24; B01J-029/74; B01J-029/88; B01J-035/04

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PN - US 5679313 A 19971021 [US5679313]
TI - AMMONIA DECOMPOSITION CATALYSTS
IN - NOJIMA SHIGERU [JP]; TOKUYAMA RIE [JP]; IIDA KOUZO [JP]
PA - MITSUBISHI HEAVY IND LTD [JP]
AP - US 472057/95-A 19950606 [1995US-0472057]
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IC - C01B-003/04

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PN - US 5679313 [US5679313]
AP - US 472057/95 19950606 [1995US-0472057]
DT - US-P
ACTE - 19950606 US/AE-A
APPLICATION DATA (PATENT)
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19950606 US/AS02
ASSIGNMENT OF ASSIGNOR'S INTEREST
MITSUBISHI JUKOGYO KABUSHIKI KAISHA 5-1, MARUNOUCHI 2-CHOME
CHIYODA-KU, TOKYO, * NOJIMA, SHIGERU : 19950518; TOKUYAMA, RIE : 1995
IIDA, KOUZO : 19950518

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PATENT

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CERTIFICATE OF CORRECTION

20020521 US/RF
REISSUE APPLICATION FILED
20020116

UP - 2002-22

PATNO IS 5679313

DATE: OCTOBER 8, 2003
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1. 5679313 , October 21, 1997 , Ammonia decomposition catalysts, Nojima, Shigeru, Hiroshima, JP; Tokuyama, Rie, Hiroshima, JP; Iida, Kouzo, Hiroshima, JP, 472057 (08), Mitsubishi Jukogyo Kabushiki Kaisha, Tokyo, JP, June 6, 1995 - ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS)., MITSUBISHI JUKOGYO KABUSHIKI KAISHA 5-1, MARUNOUCHI 2-CHOME CHIYODA-KU, TOK YO JAPAN, Reel and Frame Number: 007513/0690

LEVEL 1 - 1 OF 1 PATENT

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

5679313

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October 21, 1997

Ammonia decomposition catalysts

REISSUE: January 16, 2002 - Reissue Application filed Ex. Gp.: 1754; Re. S.N. 10/052,225 (O.G. May 21, 2002)

CERT-CORRECTION: August 11, 1998 - a Certificate of Correction was issued for this patent

APPL-NO: 472057 (08)

FILED-DATE: June 6, 1995

GRANTED-DATE: October 21, 1997

5679313 OR 5,679,313

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